

DATE OUT: 3/20/2014

SUBJECT: **PRODUCT CHEMISTRY REVIEW OF: TGAI []; MUP [X]; EUP []**

BARCODE NO.: 415636

REG./FILE SYMBOL NO.: 61483-3

PRODUCT NAME: KMG-B Penta OL Technical Penta

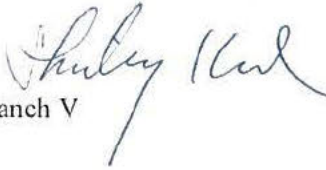
MRID NOS: 410027-02, 410027-03, 488410-01, 489796-01, 491724-01, 491724-02, and 491724-03

COMPANY NAME: KMG-Bernuth, Inc. ACTION CODE: 676

FROM: Sergey Alekseyev, Chemist
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THROUGH: Shirley Keel, Acting Team Leader
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TO: Bonnie Adler, CRM
Risk Management and Implementation Branch V
Pesticide Re-evaluation Division (7508P)

INTRODUCTION:

A Reregistration Eligibility Decision (RED), Case No. 2505, was issued on 09/25/2008 for the Active Ingredient Pentachlorophenol a.k.a. PCP. According to the REDs, the generic database supporting the reregistration of Pentachlorophenol for currently registered uses has been reviewed and found to be substantially complete.

In the 8-month response to the Pentachlorophenol RED, KMG-Bernuth, Inc. provided EPA Form 8570-35 (Data Matrix), dated 05/25/2012; letters to CRM Bonnie Adler, dated 03/03/2011 and 03/20/2014; EPA Form 8570-4 (Confidential Statement of Formula), a basic formulation, dated 03/04/2014; a draft label, punch date 05/25/2012; and MRID Nos. 410027-02, 410027-03, 488410-01, 489796-01, 491724-01, 491724-02, and 491724-03. The registrant is requesting reregistration of the product, KMG-B Penta OL Technical Penta, EPA Reg. No. **61483-3**.

FINDINGS:

1. EPA Reg. No. **61483-3** is a manufacturing-use product containing the active ingredient Pentachlorophenol (2,3,4,5,6-pentachlorophenol) and Other chlorophenols with a label claim nominal concentration of 86.0% and 10.0%, respectively; and other ingredients content of 4.0%. The product is for manufacturing use only. The product is produced by an integrated system.
2. The CSF for the basic formulation is acceptable. The active ingredient is cleared for use in pesticide formulations. The certified limits for the active ingredient are acceptable in accordance with 40 CFR §158.350. The nominal concentration of the active ingredient agrees with that on the label, meeting PR Notice 91-2.
3. Data reported in MRID Nos. 410027-02, 410027-03, 488410-01, 489796-01, 491724-01, 491724-02, and 491724-03 satisfy the product chemistry data requirements under Subgroups A and B which pertain to Product Identity and Composition, and Physical and Chemical Properties, respectively.

THIS REVIEW CONTAINS FIFRA CBI

4. The Ingredients Statement on the draft label is acceptable as per 40 CFR §156.10(g) and PR Notices 91-2, 97-5, and 97-6. Physical or Chemical Hazards section must contain statements as follows: **The product is incompatible with strong oxidizers!** The Storage and Disposal Statements are acceptable in accordance with 40 CFR §156.10(i)(2)(ix) and PR Notice 83-3.

Note to PM: Storage and Disposal section should be evaluated for compliance with PR Notice 2007-4.

CONCLUSIONS:

The registrant has satisfied the product chemistry requirements for the reregistration of EPA Reg. No. 61483-3.

Product Chemistry Data

Subgroup A: Series 830.1550 - 830.1800 (40 CFR 158.155 - 158.180)

GUIDELINE REFERENCE NO. (GRN)/ TITLE 830	40 CFR §	MRID Number	Data Fulfilled
.1550 Product Identity and Composition	158.320	CSF	Y
.1600 Description of Materials Used to Produce the Product	158.325	488410-01	Y
.1620 Description of Production Process	158.330	488410-01	Y
.1650 Discussion of Formulation Process	158.165		N/A
.1670 Discussion of Formation of Impurities	158.167	488410-01	Y
.1700 Preliminary Analysis	158.345	491724-02 and 491724-03	Y
.1750 Certified Limits	158.350	CSF	Y
.1800 Enforcement Analytical Method	158.355	491724-02 and 491724-03	Y

Subgroup B: Series 830.6302 - 7950 (40 CFR 158.190)

Guideline Reference No. (GRN) / Title 830	Value or Qualitative Description	MRID Number	Data Fulfilled
.6302 Color	Very light tan to brown	410027-03	Y
.6303 Physical State	Solid	410027-03	Y
.6304 Odor	Slightly aromatic (phenolic)	410027-03	Y
.6313 Stability	The product is photochemically decomposed and stable at temperature up to the melting point.	410027-03	Y
.6314 Oxidation/Reduction Chemical Incompatibility	The product is incompatible with strong oxidizer.	410027-03	Y
.6315 Flammability/ Flame Extension	The product does not contain flammable liquid.		N/A
.6316 Explodability	The product is not potentially explosive		N/A
.6317 Storage Stability	The product is stable after 14 days at 54 °C.	489796-01	Y
.6319 Miscibility	The product is not EUP		N/A
.6320 Corrosion Characteristics	No signs of a corrosion attack upon containers (PE) after 14 days at 54 °C.	489796-01	Y
.6321 Dielectric Breakdown Voltage	The product is not EUP		N/A
.7000 pH	The product cannot be diluted or dispersed in water		N/A
.7050 UV/Visible Light Absorption	220 nm	Letter 03/20/14	Y
.7100 Viscosity	The product is solid		N/A
.7200 Melting Point	174-182 °C	410027-03	Y
.7220 Boiling Point	The product is solid		N/A
.7300 Density/Bulk Density	1.948	Letter 03/20/14	Y
.7370 Dissociation Constant in Water	pKa=4.2 – 5.8 at 25 °C	410027-03	Y
.7550 Octanol/Water Partition Coefficient	Log P _{OW} =5 (pH = 2) or 3 (pH=7)	410027-03	Y
.7840 Solubility to Water and Organic Solvents	Solubility at 20 °C (in g/L): water – 0.008; acetone – 50; diethyl ether – 155; ethanol – 140; methanol – 202; toluene – 15	410027-03	Y
.7950 Vapor Pressure	5.1 · 10 ⁻⁵ hPa at 20°C	410027-03	Y

Explanations: Y = Requirement fulfilled; N = Requirement not fulfilled; N/A = Not applicable; G = Data gap;

U = Upgradeable; I = Incomplete or in progress; W = Waived

Confidential Appendix A

830-1550 Product Identity and Composition

EPA Reg. No. **61483-3** is a manufacturing-use product produced by the integrated system. The product contains the active ingredient Pentachlorophenol and Other chlorophenols with a label claim nominal concentration of 86.0% and 10.0%, respectively; and impurities with a label claim nominal concentration of 4.0%. Nominal concentration and upper/lower certified limits are identified in CSF.

830-1600 Description of Materials Used to Produce the Product

Materials used in the production of EPA Reg. No. **61483-3** are identified in MRID No. 488410-01 and the CSF.

830-1620 Description of Production Process

The manufacturing process for the production of EPA Reg. No. **61483-3** is identified in MRID No. 488410-01.

830-1670 Discussion of Formation of Impurities

Impurities were quantified during a preliminary study. Results are provided in MRID No. 488410-01. A discussion of each impurity identified during preliminary analysis is provided in the letter dated 03/03/2013.

830-1700 Preliminary Analysis

Results from preliminary analysis of 5 batches of KMG-B Penta OL Technical Penta for the active ingredient Pentachlorophenol and the impurities concentration are provided in the letter dated 03/03/2013 and summarized as follows:

Preliminary Analysis of Pentachlorophenol (% weight)

No. of batch	PSB-6778	PSB-9779	PSB-6780	PSB-6781	PSB-6782
Pentachlorophenol	86.1	85.0	85.3	85.9	86.9
Other chlorophenols from titration	9.1	10.5	9.7	9.9	9.7

* - the impurity of a toxicological significance.

A content of all impurities of the toxicological significance is below 0.1%.

These data pertain to the product since the lower/upper certified limits for these data are 83.42% and

88.6%, respectively (for Pentachlorophenol); and 9.0% and 11.0%, respectively (for Other chlorophenols). Therefore preliminary analysis is acceptable.

830-1750 Certified Limits:

The CSF for the basic formulation, dated for 01/03/2014, gives the following certified limits for the active ingredient:

Component	Lower Certified Limit	Nominal Concentration	Upper Certified Limit
	% by weight		
Pentachlorophenol	83.3	86.0	88.4
Other Chlorophenols	9.0	10.0	11.0

Upper and lower limits for the active ingredient Pentachlorophenol are the same as the standard certified limits. Upper and lower limits for the active ingredient Other chlorophenols are beyond the standard certified limits. The registrant justifies it with the results of Preliminary Analysis (see above). [REDACTED] impurities are identified on the CSF. Preliminary analysis pertains to these impurities.

Manufacturing process information may be entitled to confidential treatment

